

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 - 23. (Cancelled).

24. (New) A pumpable and sprayable, fiber-reinforced, strain hardening hydraulically settable mortar comprising a hydraulically settable cement other than calcium aluminate cement and in addition to said hydraulically settable cement, further comprising

a) a strain hardening amount of matrix-interactive reinforcing fibers within the range of 0.1 to less than 4.0 volume percent relative to the volume of the mortar, said matrix interactive reinforcing fibers having a length of from about 4 mm to about 30 mm, a fiber diameter between 10 μm and 150 μm , a modulus of elasticity between 10 GPa and 300 GPa, an interface frictional stress between 0.5 and 3.0 MPa, and interfacial chemical bonding between 0.1 J/m² and 4.0 J/m²;

b) at least one non-Newtonian additive selected from the group consisting of calcium aluminate cement and organic non-Newtonian additives, such that the mortar viscosity after spraying is of a higher viscosity than the mortar viscosity while spraying:

c) water in a weight ratio of 0.2:1 to 0.6:1 based on the weight of the hydraulically settable cement fraction;

d) a superplasticizer in an amount of 0.1 weight percent to 10 weight percent based on the weight of the sprayable and pumpable mortar;

e) a viscosity control agent in an amount of from 0.1 weight percent to about 5 weight percent based on the weight of the pumpable and sprayable mortar.

25. (New) The pumpable and sprayable mortar of claim 24, wherein said non-Newtonian additive consists of calcium aluminate cement.

26. (New) The pumpable and sprayable mortar of claim 24, wherein said hydraulically settable cement consists essentially of Portland cement.

27. (New) The pumpable and sprayable mortar of claim 24 wherein said non-Newtonian additive is an organic associative thickener.

28. (New) The pumpable and sprayable mortar of claim 24, wherein said viscosity control agent is selected from the group consisting of cellulose derivatives, polyvinylalcohol, acrylate polymers, and mixtures thereof.

29. (New) The pumpable, sprayable mortar of claim 24, wherein said matrix interactive reinforcing fibers are polyvinylalcohol fibers.

30. (New) The pumpable, sprayable mortar of claim 24, which contains Portland cement as the hydraulically settable cement, calcium aluminate cement as the non-Newtonian additive, and a cellulose derivative as the viscosity control agent.

31. (New) The pumpable and sprayable mortar of claim 24, wherein said reinforcing fibers are present in an amount of 0.7 to 3.0 volume percent.

32. (New) The pumpable and sprayable mortar of claim 24, wherein said reinforcing fibers are present in an amount of 1.5 to 2.5 volume percent.

33. (New) The pumpable and sprayable mortar of claim 24 which, when cured, exhibits a strain of at least 0.5% prior to failure.

34. (New) The pumpable and sprayable mortar of claim 24 which, when cured, exhibits a strain of at least 1.0% prior to failure.

35. (New) The pumpable and sprayable mortar of claim 24 which, when cured, exhibits a strain of at least 1.5% prior to failure.

36. (New) The pumpable and sprayable mortar of claim 24 wherein the reinforcing fibers have a modulus of elasticity of from 10 to 300 GPa.

37. (New) The pumpable and sprayable mortar of claim 24, wherein said reinforcing fibers have a strength of 800 mPa or more.

38. (New) The pumpable and sprayable mortar of claim 24, wherein said superplasticizer is present in an amount of from 0.3 weight percent to 5 weight percent based on the weight of the sprayable mortar.

39. (New) The pumpable and sprayable mortar of claim 24 wherein said viscosity control agent consists essentially of one or more cellulose derivatives selected from the group consisting of methyl cellulose, hydroxyethylcellulose, hydroxypropylcellulose, and carboxymethyl cellulose, the total amount of cellulose derivatives being from 0.1 weight percent to about 5 weight percent based on the total weight of sprayable mortar.

40. (New) The pumpable and sprayable mortar of claim 24, further comprising aggregate in an amount up to 200 weight percent relative to the weight of the remaining mortar components.

41. (New) The pumpable and sprayable mortar of claim 40, wherein the aggregate consists of sand or ground stone.

42. (New) The pumpable and sprayable mortar of claim 26, wherein at least a portion of said aggregate is a light weight aggregate having a mean particle size according to ASTM C125 of between 10 μm and 1000 μm .